

## CLAIMS

1. A printed page tag encoder comprising:

an input at which to receive a tag structure template;

5

an input at which to receive fixed data bits;

10

an input at which to receive variable data bit records;

and

a tag dot generator outputting single bits depending on position in the tag defined by the tag structure template and said fixed and said variable data.

15

2. A printed page tag encoder as claimed in claim 1 additionally comprising a redundancy

encoder for optionally encoding said fixed and/or said variable data.

20

3. A printed page tag encoder as claimed in claim 2 wherein the redundancy encoder utilises

Reed-Solomon encoding.

25

4. A printed page tag encoder as claimed in claim 1 wherein tags are placed regularly on a page.

5. A printed page tag encoder as claimed in claim 4 wherein tags are placed in a triangular grid.

30

6. A method of establishing printed page tags

comprising :

formatting fixed data for the page being printed together with specific tag data values according to a defined tag structure format; and

35

regularly locating tags on a page.

7. A method of printing a printed page tag as claimed in claim 6 further comprising redundancy encoding the fixed and/or specific tag data.

8. A print engine/controller to drive an ink drop printhead

5 comprising:

a contone image decoder to decode any compressed continuous tone image planes in the received compressed page data;

a bi-level decoder to decode any compressed bi-level image plane in the received compressed page data;

10

a tag encoder to produce a tag image plane; and

15 a halftoner/compositor including a dot merger unit controlled by a color mask to effect integration of the image planes and tag data plane.

9. A print engine/controller as claimed in claim 8 wherein tags are placed in the tag image plane on a triangular grid.

20

10. A print engine/controller as claimed in claim 8 wherein the tag image plane is connected to an infrared ink channel by which to place infrared ink printed tags into a printed page.

11. A print engine/controller as claimed in claim 8 wherein the tag encoder redundancy encodes the tag data destined for said tag image plane.

25

12. A print engine/controller as claimed in claim 11 wherein redundancy encoding uses Reed-Solomon encoding.

13. A print engine/controller as claimed in claim 11 wherein the print engine/controller encodes both the fixed and variable parts of the tag data.

30

14. A print engine/controller chip to interface with an ink drop printhead by which to generate tagged printed page

comprising:

an interface at which to receive compressed page data;

a tag encoder to output a tag image plane;

a contone image decoder to decode any continuous tone image planes in the received compressed page data;

a bi-level decoder to decode any bi-level image planes in the received compressed page data;

5 a half-toner/compositor to composite any bi-level image plane over any continuous tone image plane or tag image plane; and

a printhead driver to output the composite to a printhead.

10 15. An inkdrop printer to generate tagged pages driven by a print engine/controller comprising:

an interface at which to receive compressed page data;

a tag encoder to generate a tag image plane;

a contone image decoder to decode any continuous tone image planes in the received compressed page data;

15 a bi-level decoder to decode any bi-level image planes in the received compressed page data;

a half-toner/compositor to composite any bi-level image plane over any continuous tone image plane or tag image plane;

a printhead driver to output the composite to a printhead; and

20 a printhead.